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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/881,953

06/15/2001

Bruce C.H. Cheng

DeltaOpt8901

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7590

02/09/2004

Bo-In Lin  
13445 Mandoli Drive  
Los Altos Hills, CA 94022

EXAMINER

DOAN, JENNIFER

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/881,953

Applicant(s)

CHENG ET AL.

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 3,4,13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings, filed on 06/15/2001, are accepted.

### ***Specification***

2. Claims 19 and 20 are objected to because of the following informalities:

Claim 19 (line 1) recites "The method of claim 8" and claim 20 (line 1) recites "The method of claim 9". Neither claim 8 nor 9 is a method claim.

Appropriate correction is required.

Applicants' cooperation is requested in correcting any other errors of which applicants may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5-8, 10, 11, 15-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kiryushev et al. (U.S. Patent 5,962,967).

Regarding claims 1, 7, 8, 11, 17 and 18, Kiryushev et al. disclose (see Figures 1 and 2) a method and an apparatus of a color display system comprising a plurality of light emitting polymer (LEP) optical fibers each formed as plurality of light-emitting segments for emitting a specific color by using a special light emitting polymer; and the light emitting segments arranged as a two-dimensional array with each of the light emitting segments for presenting a color image (column 1, lines 11-14; column 2, lines 48-61; column 4, lines 46-57 and column 12, lines 20-42).

Regarding claims 1, 7, 8, 10, 11, 17 and 18, Kiryushev et al. do not explicitly disclose the light emitting segments **controlled to turn on and off** for presenting a color image. However, Kiryushev et al. disclose a storable information display screen for use with an electronic information processing device; therefore, the device of Kiryushev would possess a switch to turn on and off for controlling the light segments. Thus, it inherently meets the limitations of claims 1, 7, 8, 10, 11, 17 and 18.

Regarding claims 5 and 15, Kiryushev et al. disclose a color display system wherein the plurality of light-emitting segments are arranged to emit lights of red, green and blue colors for image display over the two dimensional array (column 12, lines 36-39).

Regarding claims 6 and 16, Kiryushev et al. disclose a color display system wherein the plurality of light emitting segments formed with the plurality of LEP optical

fibers (22, 24) are supported on a flexible planar substrate (52, Figure 2) to form a flexibly foldable color display system.

Regarding claims 10 and 20, Kiryushev et al. disclose a color imaging system wherein each of the optical fibers further comprising an electrode layer wrapping around the ITO layer for applying an ITO control voltage thereon (column 4, lines 65-67); the color imaging system further comprising a substrate carrier (52, Figure 2) provided with metal traces for connecting to the electrode layer (column 4, lines 65-67) of the optical fibers for turning on and off the light emitting ends.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2874

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2, 9, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiryushev et al. as cited above.

Kiryushev et al. disclose an optical device with all the limitations set forth in the claims as discussed above, except the light emitting segments comprising an indium/tin oxide (ITO) layer segment as recited in claims 2, 9, 12 and 19. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an indium/tin oxide (ITO) to make the light emitting segments, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

#### ***Allowable Subject Matter***

8. Claims 3, 4, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest the color display system wherein the ITO layer segments coated over the LEP layer whereby a voltage applied between the metal electrode layer and a selected ITO layer segment turning on a selected light emitting segment covered by the selected ITO layer segment for emitting

Art Unit: 2874

a light from the LEP layer to project outwardly through the selected IT0 layer segment as recited in claims 3 and 13.

Claims 4 and 14 are dependent on the objected claims 3 and 13 respectively.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shanks et al. (5,747,928) and Melville et al. (U.S. Patent 6,046,720) disclose an optical device having light emitting polymer light sources. And Ota (U.S. Patent 6,490,402) discloses a flexible flat color display.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*Jennifer Doan*

JD  
January 27, 2004

*John D. Lee*  
John D. Lee  
Primary Examiner